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VOL. I

NO. 1

MONTANA WILD LIFE



JUNE

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OFFICIAL PUBLICATION OF THE
MONTANA STATE FISH AND GAME DEPARTMENT

For Fish and Birds

For fish and birds I make this plea,
May they be here long after me,
May those who follow hear the call
Of old Bobwhite in spring and fall;
And may they share the joy that's mine
When there's a trout upon the line.
I found the world a wondrous place,
A cold wind blowing in my face
Has brought the wild ducks in from sea,
God grant the day shall never be
When youth upon November's shore
Shall see the mallards come no more!
I found the world a garden spot,
God grant the desolating shot
And barbed hook shall not destroy
Some future generations' joy!
Too barren were the earth for words
If gone were all the fish and birds.
Fancy an age that sees no more
The mallards winging in to shore;
Fancy a youth with all its dreams
That finds no fish within the streams.
Our world with life is wondrous fair,
God grant we do not strip it bare!

—Edgar A. Guest.



Montana Fights to Save Wild Life

By THOMAS N. MARLOWE

Chairman Montana State Fish and Game Commission



T. N. Marlowe

POPULARITY of hunting and fishing was never greater than at the present time. Thousands of people in all walks of life are today accepting the invitation offered for hunting and fishing in Montana's great forests and valleys, our crystal lakes and sparkling streams and are realizing as never before that our heritage of fish and game is probably the greatest natural resource and asset

we still retain. Every sign points to the fact that the peak in popularity of this clean and invigorating sport has not yet been reached. This being true, the work of producing more fish and game must keep pace with the tremendous and ever-increasing demand being made upon the present supply.

The task of supplying fish and game for Montana sportsmen and our neighbors is by no means easy. Each year it is becoming more and more difficult. With the steady advance and demands of civilization the feeding and breeding grounds of wild life have been greatly restricted.

In the past, much fish and game, the increase of which would greatly add to our present day supply, has been taken not so much because it was needed, but seemingly for an ever-present desire on the part of some to kill and destroy, and each year sees our present-day sportsmen growing more proficient in the taking of fish and game with tempting lures and tackles, high powered rifles, and shotguns of pump and automatic construction.

Not only this, but the automobile is an agency of wild life destruction almost as deadly as the gun of the hunter or the tackle of the fisherman. It enables the hunter or fisherman to put in more hours fishing or hunting and still get back home as early as heretofore. It has brought practically every fishing water and hunting ground to the very back door of the fisherman and hunter. It enables him to reach within a few hours places heretofore inaccessible. These places which heretofore could not be reached by the usual mode of travel for a day of hunting or fishing formerly acted as hunt-

ing and fishing preserves or sanctuaries, so to speak, and the outflow of fish and game kept the accessible hunting and fishing grounds stocked. But with the automobile we have no inaccessible places. The inaccessible hunting and fishing grounds of yesterday have become the hunting and fishing places of today and we have no overflow of fish and game from any source.

Another one of the greatest dangers threatening our future supply of fish and game has been and is the mental attitude of sportsmen themselves. With an indifference that at times has been simply unbelievable, many of us have winked at fish and game violations and seem utterly unable to see the handwriting on the wall if conditions continue as they have existed. Continued

violations of our fish and game laws can ultimately mean but one thing: No fish and game for any of us, for neither the fish nor the game can withstand the results of legitimate hunting and fishing and that which is illegitimate as well.

Until a few years ago much of our fish and game legislation was enacted almost entirely with the idea of protecting our former abundance of fish and game. However, with the opportunities for propagating fish and game, at least by natural means, becoming more and more restricted, the methods of taking wild life more deadly and effective, and the number of those who hunt and fish daily increasing, it becomes very necessary that the work of propagating more fish and game should receive increased attention.

A definite program of propagation as well as one of conservation and protection is necessary. Montana's Fish and Game Commission adopted such a program several years ago and it is with the idea of acquainting sportsmen of the state and nation with the activities of the department that the Commission has decided to publish and circulate MONTANA WILD LIFE. This publication will be the official publication of the Commission and through its columns we expect to give to sportsmen of this state authoritative information as to what our program is and what is being done by the department to make hunting and fishing conditions better in this state.

We hope in this way to keep the sportsmen of the state in closer touch with the department, and to keep them advised as to what is being done and why it is being done.

We have discovered that where dissatisfaction exists regarding activities of the department much, if not all of it, is based upon misinformation rather than the actual facts, and for this reason it is our purpose to provide once each month a comprehensive review of achievements of the department.

The pages of this publication are open to all sportsmen of the state. It is in reality your publication. Other states have similar publications and we sincerely hope that MONTANA WILD LIFE will meet with favor from sportsmen of the state and will soon take an enviable place among publications of the nation as an agency for wild life propagation and conservation.

DID YOU KNOW THAT—

MONTANA'S great program of conservation of wild life dates back but comparatively few years, yet during that short space of time results that claim national attention have been accomplished? The state law prescribing duties of the Commission was passed in 1921. In 1920 Montana had but two fish hatcheries. Today 14 well equipped hatcheries are operating and last year 58,444,000 fingerlings were planted in the restocking program. The spawn-taking station at the mouth of Flint Creek at Georgetown Lake is the largest in the world. More than 50,000,000 eggs were taken during the season last year. The state has 33 game preserves and sanctuaries embracing some 2,000,000 acres. There are 9,000,000 acres set aside in forest reserves for the propagation and preservation of game, with 240,000 acres set aside for game grazing on national forests adjacent to the north boundary of Yellowstone Park. The State Commission is rounding out the program looking toward the future which provides for the establishing of rearing ponds, the warm water pond culture station at Miles City, planting of duck food, the migratory waterfowl sanctuary in Phillips county, setting aside public shooting grounds on Red Rock Lake before the shore line has been acquired by private duck clubs, the co-operative arrangement with University authorities for operation of the biological station on Flathead Lake, and scores of similar constructive activities. This work is made possible entirely by sportsmen. Funds collected for fishing and hunting licenses, the sale of confiscated arms and furs, fines, taxidermists' and guides' licenses and similar sources provide the money to maintain the department. Not one dollar is raised through taxation. Montana has 56 counties, some of them larger than an eastern state, yet this vast territory is patrolled by only 26 deputy game wardens because of limited funds. Despite this fact, strides are being made that have elicited merited commendation throughout the nation.

Bird Sanctuary In Phillips County

WHILE fish and game authorities of Utah are alert in preserving the Bear River marshes for migratory waterfowl, Montana's state commission is continuing the conservation program by setting aside sanctuaries and nesting areas within the broad expanse of the Treasure State. The latest of these enterprises is the project in Phillips county where approximately 3,000 acres east of and adjacent to Lake Bowdoin has been made a waterfowl refuge.

Working in cooperation with the Milk River Valley Gun club, the state commission is now engaged in work looking toward retaining the water on this area by the erection of dams and raising the level of the water. Attorney John A. Tressler of the law firm of Tressler & Kirton of Malta has been especially active in this work. Mr. Tressler is a former member of the State Fish and Game Commission. He describes the project in the following interesting communication:

"Prior to 1905 Lake Bowdoin, then in Valley county, now in Phillips county, had tributary to it on the east a swamp or marsh embracing some 3,000 acres that was permanently covered with water approximately two feet deep. At that time it was one of the greatest breeding places for wild waterfowl in the western part of the United States. The source of its supply was from Beaver creek during the flood season, the water backing into the lake and thence into the swamp adjacent. How-

ever, about 1905 the United States Reclamation Service constructed ditches which practically cut off this source of supply, and about the same time a private irrigation system was installed, tapping the swamp by means of a large ditch at its east end which practically kept it drained. This irrigation system has now been abandoned, but the ditch leading from the swamp is still open. The Milk River Valley Gun club, realizing the fact that if steps could be taken to dam the ditch the outflow of water could be stopped, which would raise the level of the water in the swamp approximately 12 inches, thus assuring a permanent supply of water during the entire season.

"The matter was taken up with the owner of the irrigation system, and he very willingly consented to permit the construction of a dam. The matter was then taken up with the Montana Fish and Game Commission, which promptly

appropriated sufficient money to pay the cost of construction.

"Realizing the necessity of conservation, the club then took the proper steps to have the area which will be flooded created into a game preserve or refuge, which has been done by the commission. This will not only conserve the game and greatly increase the number of young birds each season, but will also be a benefit to hunters.

"The club believes that in all sections of the state where there is waterfowl shooting, there should be created adjacent thereto a game refuge where the birds can have protection, otherwise we will be facing the fact that our birds have disappeared and likewise our hunting."

FIGHT TO SAVE WILD LIFE

Oklahoma, the Indian's last hunting ground, is taking drastic steps to replenish its game supply, which has been decreasing at an alarming rate. More than 250,000 acres in all except two of the 77 counties are leased by the state for game preserves, where no hunter or dog will be permitted to tread for two years. Fifty-seven of these preserves contain from 5,000 to 25,000 acres each. Imported game as well as native wild life finds a refuge there. Ten thousand quail from Mexico made their nests in the Oklahoma preserves this spring and hundreds of pheasants will be turned loose in the protected areas next fall.

PREVENT FOREST FIRES

Don't throw cigar stumps or lighted matches in the leaves.

Don't empty your pipe on the forest floor.

Don't leave your camp fire without extinguishing it with water and earth.

Don't build a camp fire where it can spread.

Don't you be responsible for a forest fire.

State Fish and Game Commission in Annual Session at Helena



Left to right—Robert H. Hill, state game warden; William K. Moore, Billings; G. T. Boyd, Great Falls; Thomas N. Marlowe, chairman, Missoula; E. A. Wilson, Livingston; J. L. Kelly, Anaconda.

Science to Save Wild Life

*Trained Specialists of University Cooperating With State Commission
In Biological Research*



M. A. Brannon

MODERN science is playing a dominant part in intelligent activity looking toward conservation of wild life. Montana's State Fish and Game Commission has established a precedent in completing a co-operative agreement with authorities of the greater University of Montana preparatory to the operation of a biological station on Flathead Lake.

This station will be manned by a corps of trained scientists. They will spend the entire summer making thorough investigation of such subjects as the proper food for trout, grayling and whitefish, the temperatures of waters best suited, diseases peculiar to natives of Montana waters, desirable duck food, physical and chemical conditions required by wild life, parasites and diseases that attack fish, migratory waterfowl, mountain sheep, deer, elk and other game animals.

Reports will be made regularly to the commission to correct existing difficulties and the result of their activities, gained at the biological station and in the extensive laboratory facilities at the state university at Missoula in collaboration with the United States Bureau of Fisheries and the United States Biological Survey, promise vast eventual benefits to the sportsman.

Professor M. J. Elrod of the state university staff will head activities and, in keeping with plans now being made by Chancellor Melvin A. Brannon, an advisory board will be in constant supervision.

The station, on Yellow Bay in Flathead Lake, is surrounded by a tract of 90 acres covered with virgin forest with 70 acres on islands in the lake. The lake shore line of the station grounds covers nearly $1\frac{1}{2}$ miles. The lake width at the point is nearly 20 miles and the depth in front of the building is 125 feet. The Mission mountains rise almost abruptly from the lake, 8,500 feet and are densely wooded. Nearby are the inlets of Swan and Flathead rivers, the lake outlet with its tempestuous rapids, mountain cliffs and slopes.

The biological station proper will be housed in the two-story brick building

of which the first floor is cement, piped with running spring water and completely equipped with necessary apparatus. Included in the station are microscopes, utensils, nets, dredges, collecting apparatus, boats, a collection of birds and plants of the locality, a collection of bird skins and insects.

Flathead Lake covers nearly 200 square miles. It varies in depth from extensive swamps to 300 feet. More than a hundred miles of forest reserve begins at the station door. At either end of the lake are extensive prairies. The entire country is glaciated and the fauna and flora are rich and varied.

Melvin A. Brannon, chancellor of Montana's greater university and one of the best known exponents of biological research in the west, has prepared the following statement regarding the scientific cooperative service with the Montana State Fish and Game Commission:

"The problems of living matter are multiple and complex. They change at every instant of the individual life which begins with a single cell and terminates with death. Ordinarily we dismiss the story of a living organism with a few statements in regard to providing suitable food, pure water and an abundance of oxygen with saline substances and light and heat in quantities correctly proportioned to the organism with which we are concerned.

"Little or no attention is given generally to the questions of eliminating waste products from the living organism itself and eliminating poisonous material from its aqueous or gaseous environment. Only the plant and animal physiologists who are engaged in research studies of living matter take account of the multiple physical and chemical factors in the water, in the food and in the air which determine the welfare of the individual and its successful reproduction. The students of physiology deal continually with questions of physics and chemistry when studying the actions and reactions of living matter within its environment during the juvenile, adolescent, adult and senescent states.

"Members of the Montana Fish and Game Commission have frequent occasion to know the physical and chemical conditions of the waters used in fish hatcheries and in the streams and lakes of the state where plantings of fish are made. They also have frequent occasion to use reliable information respecting the sources of food used by game birds and game animals. They are particularly concerned with questions pertaining to parasites and

diseases which affect fish, game birds and game animals.

"Recently plans have been made to capitalize the training of scientists in the departments of biology, chemistry and physics at the state university in order to secure the scientific information required by members of the Fish and Game Commission in furthering their important state service of fish propagation, fish distribution and the propagation and distribution of game animals in Montana. This cooperative project, which the Fish and Game Commission has so wisely approved, will put into immediate action plans for studying the factors of light, heat and osmotic pressure at different depths in the water of Flathead Lake and other lakes in the state and in various creeks and rivers of Montana. Likewise this cooperative arrangement will make possible extensive chemical studies of Montana lakes and rivers with reference to salts and gases which they contain. These physical and chemical studies will precede and accompany studies of the organisms which are used by the fish for food, as well as organisms which are parasitic and detrimental to fish. Biological studies with reference to the fish parasites and diseases will also be associated with similar studies of parasites and diseases affecting birds and other game animals in the state.

"The important laboratory for the study of tick control and its relations to spotted fever is located in the Bitter Root valley. The Department of Entomology at the State College is intimately associated with this highly important service institution. The recent action of the Fish and Game Commission in approving the cooperative project with the Biological Station on the shores of Flathead Lake will incorporate the services of the natural science departments at the state university unit of the Greater University of Montana, and thus make possible an increased utilization of the research work being done in the Greater University of Montana.

"The Fish and Game Commission is to be commended and congratulated upon this wise and statesmanlike procedure of associating their difficult and complex services with scientific research which is carried on in biology, chemistry and physics at the State University of Montana."

A THOUGHT

Art in its various fields is man's noblest expression. Nature is a revelation of God.

The Tale of a Trout

By **RICHARD L. THROSSEL**

Member Montana House of Representatives from Yellowstone County



Richard Throssel

SPORTSMEN of Montana have in operation within their own state the world's largest spawn-taking station, operated for them by the State Fish and Game Commission. Of this work we all have a vague understanding, but to only a few has been given the opportunity to observe fully the work done and to come in contact with the courteous employees from whom precise and exact information is drawn. I am one of the fortunate few.

When recently assigned the work of making a reel of movies showing fish culture work done by the Fish and Game Department, I believed it would be dead easy, for I grew up on a trout stream in Washington and knew all about fish (so I thought). But on reaching the place of operation and talking with men in charge I found that I did not have even a smattering of fish culture knowledge. Consequently the making of this picture was a liberal piece of education for me, for, like other fishing enthusiasts who have always been on the receiving end, I had no idea of the amount of work necessary to keep streams stocked.

On reaching Georgetown Lake the first amazing feature was the number of big trout in Flint Creek and the traps. I could scarcely believe my eyes. It resembled the salmon runs on the coast, and the trout were almost as large in size. Visitors constantly exclaimed: "If I could only fish here."

From the number of fish in the traps one could readily see the necessity for employment of the crew of six or eight men. I found these men experts in fish culture brought in from different hatcheries at no additional expense to the state. Here the largest spawn-taking station in the world is being operated by the Montana State Fish and Game Commission at only the cost of boarding the men. Here each year 35,000,000 or more trout eggs and 15,000,000 grayling eggs are taken at a relatively trifling expense to sportsmen of Montana, and the work done by experts.

When Flint Creek was dammed for a power site Georgetown Lake with its 27 miles of shore line and submerged meadows was formed. The re-

sulting abundance of fish food gave to Montana one of the finest fish growing spots on the American continent. Fed by mountain streams in which the trout spawn, with plenty of space and food for growing the entire year, it

FISH PHOTOGRAPHY

Throughout eastern America and in foreign countries, the fame of Richard Throssel has traveled as the originator of The Throssel Prints depicting Indian life. During his younger years he lived and associated with Montana Indians to gain an insight into their mannerisms. Then he photographed them. His collection of photographs and paintings of Indian life is a marvel. He was recently delegated by the State Fish and Game Commission to make a moving picture reel showing the manner in which Montana fish experts take the spawn, handle the hatcheries and plant the fry. In this interesting article he gives his personal impressions of the work.



Planting fingerlings in the cool, placid headwaters of one of Montana's trout streams.

was picked by the Game Commission as the one place for a spawn-taking station.

On Flint Creek just above the lake the Commission constructed the traps and runways for handling thousands of trout that abound in the lake. Into these traps the fish must come when the call of nature takes them upstream to spawn.

These trout are from 16 to 30 inches long, averaging about 20 inches. Of all varieties the rainbow grow the largest. In the waters of Flint Creek one sees them by the hundred and it's a sight worth making the trip to see.

After entering the runways the trout are seined and placed in handling traps. Two traps are necessary for handling the large number that come from the lake. From two to four men work at each trap. They don waders and slickers, use a glove on their left hand to hold the fish, and go right in among them.

The fish are placed in a handling box with a dip net and the men select one of the females for stripping. Holding the fish by the tail the expert swings the head under his right elbow then presses the belly from head toward the tail. If "ripe," the eggs are brought forth and caught in a pan. When a quart or so of eggs are taken, a male of the same species is taken and milt for fertilizing the eggs is caught in the same pan. With their fingers the experts stir the eggs thoroughly, mixing them with the milt. The eggs are then washed and placed in buckets or cans. Eggs from different varieties are kept separate.

After watching this operation the casual visitor begins to wonder about the efficiency of the system. One hears expressions from many leading to the inference that the facts are not of general information. Summing the questions it's like: "Why all this? So they think they are improving on Nature?"

First, considering Nature: The eggs are only a little heavier than water and are dispersed and washed down stream. Only a few lodge in the gravel near the nest. The milt is diluted and washed down stream also, making fertilization problematical. The spawn is sought and eaten by other fish. In artificial methods all the eggs are held and milt placed in contact in an almost undiluted state, making fertilization certain. The eggs are placed in ideal condition for incubation compared with open streams. They can not become fish food and are cared for daily.

The resulting fry is widely distributed, giving greater benefits than having 35,000,000 eggs hatched in one stream. The figures quoted by Dr. I. H.

Treece, western field superintendent, show that in natural conditions about 10 per cent of the eggs hatch, while with artificial or hatchery methods more than 80 per cent hatch and are planted. This is an improvement of around 800 per cent.

The second surprising feature about the work is the large figures quoted by experts in the work. The figure 10,000 seems to be the smallest unit or number they use and 100,000 or 500,000 is spoken with the same indifference as a layman would say a dozen or two dozen. At first one almost fails to grasp these numbers.

For transporting the eggs are packed in specially built boxes. Small trays about 10 inches square and 4 inches deep are lined with wet cloth and the eggs measured into them, first the cloth and then a layer of wet moss covering the top. These trays are nested into a larger box with a 4-inch space for ice. This keeps them moist and cool.

From three weeks to a month after the eggs are placed in the hatchery troughs they are hatched, depending on the temperature of the water. During the time of incubation these eggs need daily care. After hatching the fry need nearly as much.

After reaching the size of a two-inch fingerling the trout are ready to plant or place in rearing ponds. These ponds at the Anaconda hatchery are about 15 feet long and four feet wide with a depth of about 15 inches. Some 100,000 fingerlings two or three inches long fill one. It takes 100 pounds of feed a week to feed the fry in one pond. With the increased size of the fry as they grow, it would be necessary to provide more space and an increased amount of feed, and the larger they grow the more feed is needed in proportion to the number of trout.

It takes but little figuring to decide the amount of space and feed it would require to take care of 35,000,000 trout. The expense of distribution would increase with size, it being obvious that fewer large trout could be handled per trip.

With the nominal amount charged for hunting and fishing licenses, making economy a necessary part of the pro-

gram, early planting becomes a necessity. The state of Washington with less than half the area of Montana is charging \$7.50 for a state license, in addition to a gun license of \$1.50, or a separate charge of \$1 per county for fishing only, if a state license is not wanted. With an increase in revenue it would be possible to hold the fry longer.

Further, when the fry from spring spawning is planted before fall spawning comes on, the capacity of the hatcheries is doubled. The two auto trucks recently constructed and put into service by the Commission are so much more efficient than handling fry in cans that the fry reach the planting grounds in perfect condition and are much more able to take care of themselves from the start.

The loss in transporting in these motor trucks is nil. I saw a load of 80,000, which is an ordinary express car shipment of cans, taken from the Hamilton hatchery to a point some 20 miles down the valley. On reaching the planting grounds it was found that only three fry were dead, these being caught under the air-distributing pipes.

These trucks automatically aerate and cool the water by pumping cold air through a coil in a box of ice on the outside into distributing pipes on the bottom of the main tank. The driver regulates the temperature to keep it the same as the water in which the fry have been living. It is amazing to see how active and well the fry remain during the time they are in the tank.

These trucks enable the planting without intermediate handling and delay that usually occurs when planting with cans. There is no express charge and no need for a large number of autos to handle them from the railroad to streams.

The planting pictures were made at places selected to plant eastern brook and seemed ideal, the stream containing plenty of aquatic vegetation, open sandy places, and running spring water. Each locality has its individual problems of planting which sportsmen survey and analyze, thus greatly helping in the planting of fry. Rearing ponds, fed by spring creeks, constructed to empty

into the larger streams, seem to be the ideal arrangement.

Summing up the situation, it appears that it requires the combined efforts of some 50 employes in the 14 state hatcheries from three to six months to provide the large number of fry given to local clubs of sportsmen for planting. Indifferent planting and lack of co-operation nullifies their work and reduces the chances for good sport during the fishing season. To keep good fishing in Montana streams it behooves us to co-operate with the State Fish and Game Commission in this vast conservation program.

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Editor's Note—J. J. Meany, the artist-poet of the State Department, is a deputy game warden stationed at Plains. He works in oils as well as with the pen and his drawings and paintings are true to life.

By J. J. MEANY

(Without apologies to Kipling or any other bloomin' beggar)

If you can lug a pup-tent and a soogau
Besides your grub and axe and frying pan,
And hit the trail and smile as you're about it
And hold your own with any dog-gone man.

If you can nestle down behind a wind-fall
And pass the night in comfort and in peace,
And feel next morning, when you hit the uncut,
That life has given you a brand new lease—

If you can go when there is no good going
And wade through snow so deep your pockets fill,
You'll swear a bit, perhaps, to ease the pressure,
But show the world that you can fill the hill.

If you can meet with those you know oppose you
And show them where they're wrong, yet make a friend,
And drive your point so hard it makes them scatter,
But do it in a way that don't offend.

You'll never know the "feel" of wealth behind you,
They'll never know you in the Hall of Fame,
You will contribute to a cause that's mighty—
You'll be a damned good Warden just the same.



Two fish planting trucks of the fleet maintained by the State Commission illustrate the modern manner in which eggs and fingerlings are handled. The eggs from the spawn-taking station at Georgetown Lake, the largest in the world, are placed in iced cases, loaded in the truck shown at the left, and hurried to the hatcheries. The speedy truck at the right, stationed at Georgetown, is equipped with a special tank, modernized facilities for aerating the water and other devices for preserving fingerlings when taken from hatcheries to streams for planting and restocking. The second of these tank trucks has just been completed and is stationed at the Big Timber hatchery.

MONTANA STATE FISH AND GAME COMMISSION

COMMISSIONERS.

Thomas N. Marlowe, Missoula, Chairman.
G. T. Boyd, Great Falls.
Joseph L. Kelly, Anaconda.
W. K. Moore, Billings.
E. A. Wilson, Livingston.



ROBERT H. HILL, Helena
State Fish and Game Warden.
Secretary.

MONTANA WILD LIFE

Official Publication of the Montana State
Fish and Game Department.
Published Monthly at Helena, Montana.

Application filed for entrance to the mails at the post-office at Helena as second class matter under the Act of March 3, 1879.

FLOYD L. SMITH, Editor.

Introductory Subscription Rates
15 Cents per Copy—50 Cents per Year
Advertising Rates on Application

Copy for advertisements subject to approval of State Commission and must be in the hands of the editor at the State Capitol building, Helena, on the 15th of the month preceding publication date.

VOLUME I.

JUNE, 1928.

NUMBER 1.

MONTANA WILD LIFE

EDUCATION goes hand in hand with the progress of wild life conservation, and education is the province of this magazine. Definite, positive knowledge of any subject fortifies the thinking man and woman. Misinformation or garbled facts create unwarranted situations that reflect discredit and arouse bitterness that becomes a boomerang. Montana has taken a position of enviable prominence in esteem of sportsmen of the nation because of tireless efforts being put forth by her conservationists. Despite the fact that thousands of visitors are turning their motor cars toward Montana for the annual vacation. Montana's fish and game resources are being conserved. During the last 10 years the State Fish and Game Commission has made possible the establishing and equipping of 12 great fish hatcheries, bringing the total to 14, which last year alone enabled the planting of 58,444,000 game fish fingerlings in state streams. The state commission has embarked on a great program of the establishing of rearing ponds, the setting aside of public shooting grounds, for future generations, the flooding of waste areas to provide rest and nesting grounds for migratory waterfowl, protection of upland game birds, the planting of duck food, stocking of desired areas with Hungarian partridges, Chinese pheasants and quail. This work is made possible entirely by the sale of hunting and fishing licenses, fines, the sale of confiscated arms and through the sale of licenses to guides, taxidermists and trappers. Sportsmen of the state conversant with the facts are enthusiastically cooperating with the department. When they know the facts they become more thorough conservationists. The State Fish and Game Commission has established MONTANA WILD LIFE to meet the demand for accurate, authentic information. It is published to disseminate authoritative information regarding activities of the department. Its purpose is to present the facts, secure in the knowledge that authentic statistics have an educational value appreciated by men who love the out-of-doors.

A MERITED TRIBUTE

The re-election of Thomas N. Marlowe of Missoula as chairman of the state fish and game commission was a worthy tribute to a fine, public-spirited sportsman who has done more for the conservation of fish and game than any other citizen in Montana.—The Butte Miner.

STRONG MINDS, GREAT HEARTS

WHILE Montana's State Fish and Game Commission is in the midst of a vast conservation program being watched intently by sportsmen of the entire nation, idle critics anxious to tear down rather than build up, are vainly striving to create a cloud of doubt as to the wisdom of these foresighted leaders. It has been declared that conservation work in the United States is not more than 10 per cent efficient. It is asserted that conservation forces are divided, that they are not a unit. These facts may be true in part.

It has been the faltering, hesitating policy, the failure to act because of fear of the ghost of criticism that has retarded work of conservation in many states. Montana's State Fish and Game Commission is looking toward the future. While the eyes of sportsmen of the nation are fixed upon activities in Montana, the commission has demonstrated constructive courage. It has anticipated demands being made on Montana's forests and streams. It is proceeding along constructive lines in restocking these playgrounds for posterity.

In this day and age when the pulpit, the platform, the press and the bench at the corner grocery store are reeking with propaganda, the conscientious sportsman who believes in fair play can apply but one safe test: "What are the facts?" With the facts in hand he is qualified to decide for himself. Montana sportsmen who know the facts regarding activities of members of the commission who are giving unselfishly of their time, talent and business ability for the cause, appreciate their efforts. What the conservation movement throughout the nation needs today is competent, courageous and vigorous leadership of the Montana type.

The lines of Josiah Gilbert Holland, though written nearly three-quarters of a century ago, never meant more than they do today:

God give us men! A time like this demands
Strong minds, great hearts, true faith, and ready hands;
Men whom the lust of office does not kill;
Men whom the spoils of office cannot buy;
Men who possess opinions and a will;
Men who have honor,—men who will not lie;
Men who can stand before a demagogue,
And damn his treacherous flatteries without winking!
Tall men, sun-crowned, who live above the fog
In public duty, and in private thinking;
For while the rabble, with their thumb-worn creeds,
Their large professions and their little deeds,—
Mingle in selfish strife, Lo! Freedom weeps,
Wrong rules the land, and waiting Justice sleeps!
God give us Men!

BACK UP YOUR WARDENS

"BACK up your game wardens," is the gist of a signed editorial by Paul G. Redington, chief of the Bureau of Biological Survey, United States Department of Agriculture, appearing in a national sportsmen's magazine.

"Federal and state wardens are the infantry of the game-conservation forces. 'They are literally upon the firing line,' he said, 'in the obscure, many-sided battle that is going on between those who believe in the perpetuation of wild life and the regulated sport of gunning, and those others—who would callously destroy the living resources entirely in order to fill their pockets with the silver of Judas, or to gratify a degenerate lust for killing.

"It is time to realize that the successful enforcement of sensible regulations to protect game is dependent upon the attitude of that part of the public interested in these things.

The Forum

This is Where You Get it Off Your Chest

MONTANA WILD LIFE solicits pertinent discussion of matters of constructive interest to sportsmen and pertaining to the out-of-doors. Contributions for publication here should be reasonably brief and must be signed, but a fictitious name will be used if requested and supplied by the writer. We will print it if it is printable whether we agree with the writer or not.

Warden Defends Pheasant

SPORTSMEN among farmers in many portions of Montana are demanding an open season on the Chinese or ring-necked pheasants. Some complain of crop damages, attacks on domestic chickens and garden depredations. Here is a letter from a student of the situation that's interesting:

"I have given particular study to the bird and have made careful investigation of the complaints.

"There is no question but that the pheasant causes some damage, as do all birds and animals which gather their living in the fields, but it is my honest opinion that this bird, in most cases, is worth its weight in gold to any farm or place it inhabits.

"I have seen places where the pheasants would work on certain crops, such as corn and garden crops, in some cases scratching out potatoes and picking holes, much as a domestic hen would, but these cases are rare.

"During the season of 1926 it was my privilege to check many hunters, and whenever it was agreeable to them I would use my knife to discover what the birds were feeding upon, at the same time asking the location where the bird was killed and what food was available in that particular case. I can truthfully say that of the 400 odd birds I opened, I do not believe that there was one quart of farm products in the crops of the entire lot; at least, there was not to exceed 5 per cent of grain or farm products.

"Their principal food seemed to be a small brown seed found mostly along the marshes. Many of them had feasted on bugs and worms.

"One sometimes hears it questioned why the sportsmen bring such birds as the pheasant and Hungarian partridge into the country. It is my opinion that if the Hungarian partridge is worth half as much as the ring-neck from a sporting standpoint or as an asset in the destruction of insect pests, by all means bring him on.

"When the pheasant walks out into the open or appears in a field, he stands like a monument and is blamed for many offenses that he has not committed. In many cases he is 'picked on' because he is so good to eat, and is held more to be desired on the table than in the field.

"The pheasant is worthy of a great deal from a sporting standpoint as well as for its food value, and I am sure it is worth every cent it has cost us to introduce it, and many times more.

"One bird was killed in a potato patch in Idaho where there is an open season and the remains of 24 potato hogs were found. Two others were killed in an alfalfa field by a mower, and these contained the remains of more than 50 grasshoppers. Some farmers tell me they would not take \$25

each for the pheasants in their alfalfa fields.

"I say, more support to the propagation of this bird, and more power to him!"

THE MOUNTAIN STREAM

Bright and clear its waters shining,
Rushing on its way;
Turb'lent, swift, as though declining
Rest from day to day.
Always rampant, always rushing;
Naught can say it nay;
With a force beyond all hushing
As it sings its lay.
Mountain streams in countless numbers
Such as this are found;
Waking from their winter's slumbers,
Dashing o'er the ground.
There the angler, pleasure seeking,
Casting out his fly,
Sees the trout come madly leaping,
Striking swift yet shy.
See the pools and eddies forming,
Hiding places rare;
See the lure, bright red a-dorning
Floating o'er the lair.
See the sparkling fin pursuing
Swift as lightning's flash;
See the battle then ensuing
Ere the final crash.
Don't this set the pulse a-toiling
Settling up the score?
Won't it start the blood a-boiling—
Who could ask for more?

—J. Nort White.
Helena, Montana.

THE HUNTING HOUSE CAT

Warning of the terribly destructive nature of the common house cat, particularly those individuals which have gone wild or are allowed to roam at will on the Montana prairies and fields, will always bear repetition. The summer season is when they are most destructive because bird life is most plentiful and their victims most easily obtained.

The sportsmen's clubs of California

SPORTSMEN AID STATE STOCKMEN

MONTANA sportsmen are not only providing funds with which conservation activities of the State Fish and Game Department are being financed, but they are contributing a substantial share toward aiding stockmen in protecting cattle and sheep against predatory animals. Here are official figures, prepared by Hans DeYoung, cashier in the office of the state treasurer, that tell a significant story: Out of the fee collected for each hunting and fishing license, 25 cents goes into the Biological Survey fund. The law covering the situation was passed in 1921. Between June 30, 1921, and April 1, 1928, the total receipts of the Fish and Game Department have been \$1,269,159.26. During the same period sportsmen of the state contributed to the welfare of stockmen a total of \$117,527.17, of which \$15,000 was transferred to the state bounty fund by law of 1925.

have recently issued a striking poster calling attention to the destructiveness of cats. The poster is entitled "CATS EAT BIRDS" and contains the following striking and significant language: "Semi-wild ex-house cats are bigger than man in game bird consumption and a menace to song and insect-eating birds. Do not abandon cats in the country to prey upon our already depleted bird life. Get rid of them in some other manner. Save birds."

One of the most convincing documents yet printed on the destructiveness of the cat is by Edward Howe Forbush, state ornithologist of Massachusetts, entitled "The Domestic Cat."

Deer are Plentiful

Deer, both blacktail and whitetail, are extremely numerous this year in Lincoln county. Driving along the highway in the evening a stranger would believe himself to be in a game preserve, so gentle and numerous are they. This is a great asset to Lincoln county and much enjoyed by the through tourists and will eventually go a long way towards tourists routing this way. Numerous slight accidents have occurred, however, to autoists at night time colliding with these deer and tourists routing this way should use all caution in driving at night time, as deer become blinded and rattled by the headlights. While returning from a picnic of high school students a car came into collision with a white-tail buck, breaking both his hind legs, putting the car in the ditch and slightly injuring the occupants of the car. The deer was put out of misery, dressed and hung up and reported to the deputy game warden.

Numerous deer-licks are along these highways and are used to such an extent that holes are dug into the road and have to be repeatedly filled in by the road maintainers. The elk that were planted in this county are showing an increase and this county in due course of time is destined to become one of the best game districts in the world.

WM. J. DORRINGTON.
Libby, Mont.

'00, '00!

An Englishman heard an owl for the first time.

"What was that?" he asked.

"An owl," was the reply.

"My dear fellah, I know that, but what was 'owling?"

THERE'S A DIFFERENCE

The poet says,

"There are sermons in stones and books in the running brooks."

The fisherman says,

"There are sermons in books and stones in the running brooks."

Montana, Playground of the West

By A. J. BREITENSTEIN

Secretary Montana Automobile Association



A. J. Breitenstein

THERE are innumerable reasons why "See Montana First" is actually becoming the slogan of more and more eastern and out of the state travelers. Every thinking tourist, if asked, would enumerate such reasons as follow for Montana's magnetism.

First. Montana, in co-operation with good citizens, is building good roads just as rapidly as possible.

Second. Better roads are making accessible the beauty spots of the state. Yellowstone and Glacier National Parks probably lead Montana's scenic attractions, yet there is not a section of the state where some type of natural beauty does not thrill the traveler.

Third. Many interesting resort hotels, camping spots and recreation resorts are winning erstwhile tourists as permanent summer residents.

Marked historical spots along graveled highways recall to the tourists' minds the days of the red man, pioneers, and Vigilantes, and recollections of their daring deeds stir the imagination.

And among Montana's attractions for the tourist is her abundant wild life, fishing and hunting. It thrills the visitor to catch a glimpse of a herd of antelope, a grizzly or lone mountain goat giving a peculiarly western touch to beauty of the scenery. It is the hunting and fishing through silent pines which lures people to them. It is a herd of buffalo that most vividly recalls days when Montana history was in the making.

Montana has its own peculiar appeal to all classes of people and tourists. To the world-weary her mountains beckon them to come forth and enjoy life. To those who would get away from cares and worries of routine existence and seek comfort and relaxation, Montana's forests, lakes and streams offer inviting retreats. To the red-blooded who care to track big game or battle with fighting trout, Montana's best is America's best. Hunting and fishing always have, and will continue to be among the state's most noted attractions because of activities of the state fish and game commission. Sportsmen assert there is more big game in Montana than anywhere else within

the continental limits of the United States.

There are 33 game and bird preserves in Montana which furnish a retreat to wild game and serve as breeding grounds to replenish game in the adjacent hunting regions.

Take any portion of the state, and note its chief attractions. Invariably, its beauty of wild life, its splendid hunting and fishing, is spoken of in the same breath as its wondrous scenic beauty.

There is the Big Horn-Custer country which was once the domain of countless buffalo and antelope. Hill-sides bordering upon the mountains still are the feeding ground for herds of antelope and other wild game.

In the Gallatin-Madison country elk, deer, bear, mountain lion and wolves are at home. Hunters find the region

GOOD ROADS, GOOD SPORT

Thousands of eastern automobile tourists, eager for a breath of western ozone, yearning for playdays in untrammelled hills and dells, are looking toward Montana for their annual excursions. If Montana's fish and game resources were eliminated, the joy of these trips would be sapped. Montana welcomes these eastern sportsmen. We're elated to be able to share Nature's Wonderland with our neighbors. Members of the Montana Automobile Association are working in complete harmony with members of the State Fish and Game commission to maintain these natural attractions. Secretary Breitenstein of the automobile association reviews some of these wild life magnets in the accompanying article.

most attractive during the hunting months. There are many fine fishing streams in this section.

Big game abounds in the Greater Yellowstone country. Here the tourist finds buffalo, moose, elk, deer, big horn sheep and antelope, the bear, wolf, lion, coyotes, fox, lynx, marten and beaver just as great as lure the hunter. In addition to the rugged mountain region, the Absarokee forest includes an isolated range of the Crazy Mountains, which stands aloof and majestic. This was the hunting ground of the Absarokee Indian before the white man came. In recent years it was a favorite hunting ground for Theodore Roosevelt. Today it is one of the best big game regions in the west.

In the Helena country Ten Mile, Wolf Creek, Canyon Creek, Prickly Pear, Beaver Creek and Trout Creek denote great fishing. Good bird hunting, trout fishing and deer hunting draw the

tourist to the Helena and Jefferson forests.

Moose are often seen in haunts of the Bitter Root country. Here, also, there are many lakes and clear, cool streams. Here the elk and deer, mountain goat and grizzly, moose and cougar are at home. Cut-throat and other sly trout find many lakes and streams secluded enough to be unfished practically all year. These are the haunts the tourist seeks for real hunting and fishing.

In the Flathead-Swan Lake region a liberal open season allows fine elk hunting. Bear and deer hunting is good. The Sun River and Twin Butte game preserves and several other areas are devoted exclusively to the protecting and feeding of wild game in the Lewis and Clark National Forest.

Clark's Fork and the Big Blackfoot Rivers with contributory streams are stocked with fine trout by state hatcheries at Georgetown Lake and Ovando.

In the Flathead Lake country there is a large tract of land set aside as a national buffalo reserve where one of the few remaining herds of these animals is to be seen.

To the fisherman there are the lakes and streams with their collection of trout, bass and land-locked salmon. To the hunter the national forest areas are noted for quantity and variety of game.

In the West Glacier country fishing is excellent in practically all the lakes and larger streams. While hunting is forbidden in Glacier National Park the national forest areas are famous for big game.

Wild life in Montana holds fascination for any tourist. The sportsman, the hunter and fisherman, both eastern and western, finds a veritable Paradise in Montana. The fisherman has first hand the finest trout fishing in America. Rainbow, Loch Leven, Eastern Brook, Native and other varieties are all here—gamy, fighting fish of delicious flavor.

Every one over 15 years of age, resident or non-resident, must have a fishing license in Montana. The tourist must remember that in this region he is privileged to enjoy the finest trout fishing in America because the money paid for licenses, nearly all by Montanans, provides the funds whereby lakes and streams are kept stocked and replenished. When the tourist buys his license he is simply doing his part to help make sure the fishing will be good when he comes back.

The photographer finds ample picture material. The tourist who carries a kodak is bound to get interesting pic-

tures of elk, deer, mountain sheep and goats, grizzlies, buffalo, moose and caribou.

The tourist is equally captivated who merely sees from his automobile such fascinating pictures as squadrons of wild ducks rocking on lakes and rivers—perhaps a coyote slipping like a gray phantom into a nearby coulee—a lone mountain goat, standing aloof and high on a Yellowstone mountain peak—or a hundred other enchanting pictures.

Montana's Salaried Game Wardens

Robert H. Hill	State Fish and Game Warden
Jack W. Carney	Assistant Game Warden
Thomas O. Peasley	
	Deputy Game Warden at Large
L. S. Butler	Roundup
L. C. Clark	Havre
W. J. Dorrington	Libby
W. A. Hill	Missoula
Allen T. Holmes	Billings
E. M. Krost	Plentywood
J. P. McCaffery	Anaconda
Frank R. Marshall	Bozeman
J. J. Meany	Plains
L. Minugh	Malta
Harry Morgan	Ovando
P. W. Nelson	Livingston
A. A. O'Claire	Kalispell
Fred E. Pilling	Butte
Charles R. Price	Dillon
A. D. Roushar	Great Falls
Frank M. Snider	Choteau
J. A. Weaver	Lewistown

Special Salaried Deputies

William Ray Kohls	Ennis
Frank Beller	Gardiner
Thomas Danaher	West Yellowstone
LeRoy DesRosier	Browning
J. F. Goldsby	Polson

POISON OAK REMEDY

The following formula, developed after many years of study and experiment at the University of Chicago, is said to be a specific cure for poisoning by poison oak, poison ivy, and similar shrubs:

To equal parts of alcohol and water or glycerine and water, add sufficient ferric chloride to make a five per cent solution. Ferrous sulphate may be used but the ferric chloride is preferred.

If one bathes with this solution before going into the woods, such plants as those cited above may be touched or handled without fear of poisoning. If the poisoning has already occurred, the parts should be bathed with this solution and dried thoroughly with a fan. Quicker results may be obtained by coating the poisoned parts with paraffin, on which should be laid a thin layer of cotton and a coat of paraffin put on top of the cotton. This excludes the air, prevents scratching and allows the new skin to be more quickly restored.



You furnish the tent.
Montana will do the rest.

Licenses Issued by Counties in 1927

The following informative table, compiled in headquarters of the State Fish and Game Department, for the fishing and hunting season of 1927, shows in detail the number of licenses issued in each of Montana's 56 counties. Careful study of the table reveals the source of the financial support of activities of the State Commission. The total resident licenses issued in 1927 reached 68,885, while 3,091 were issued to non-residents.

	Resident	Non-Resident	Alien Fishing	Non-Res. Limited	Non-Res. General	Alien General
Beaverhead	1,737	141	1	1		
Big Horn	539	13				
Blaine	390	1				
Broadwater	570	1				
Carbon	2,597	100	43			1
Carter	8					
Cascade	5,008	56	21		3	1
Chouteau	572	3	1			1
Custer	433					
Daniels	189					
Dawson	266	1				
Deer Lodge	2,630	53	18	6	8	
Fallon	34					
Fergus	1,942	23	1	1	3	
Flathead	4,657	132	17	2	4	
Gallatin	3,586	626	1	21	2	1
Garfield	12					
Glacier	345	31	6	6	8	1
Golden Val.	115	1				
Granite	591	11	3			
Hill	1,225	8	2		13	
Jefferson	696	17				
Jud. Basin	758	6				
Lake	1,491	120	1	1		
L. & Clark	3,839	90	17	1	20	5
Liberty	47					
Lincoln	1,973	115	6		20	
Madison	1,416	159			2	
McCone	12					
Meagher	594	23				
Mineral	644	47	1			
Missoula	4,350	150	16			
Musselshell	813	6	3			
Park	2,558	63	6	10	23	1
Petroleum	61					
Phillips	347	2				
Pondera	565	3				
Pow. River	24					
Powell	1,544	31	2		1	
Prairie	40					
Ravalli	1,930	63				
Richland	163					
Rosebud	231	2				
Roosevelt	373					
Sanders	1,208	92	4			7
Sheridan	629	4	7			
Silver Bow	8,196	65	77	2	2	2
Stillwater	1,071	50	1		3	
Sweet Grass	630	50				
Teton	522	5		2	2	
Toole	833	1				
Treasure	50					
Valley	352	1				
Wheatland	659	11	5			3
Wibaux	47	3				
Yellowstone	2,943	49	6	1	3	3
Idaho		559				
Washington		82				
Utah		10				
Total	68,885	3,091	259	62	115	26

What's Doing in Conservation



Important information of national interest will appear in this department each month

By SETH E. GORDON

Conservation Director, Izaak Walton League of America

EVERYBODY agrees that education is a more effective weapon than legislation. Whether you call it education or propaganda, it means the same thing—molding public opinion.

Legislation is essential to furnish a legal working basis. Busy legislators, annoyed and harassed from all sides, often have difficulty in distinguishing between public sentiment and inspired propaganda promoted for selfish purposes.

In this day of intensive organization and lobbies for every conceivable purpose, legitimate and otherwise, about the only rumblings that catch the ear of our representatives in the legislative halls are those coming from their own aroused constituents. This is true especially if those rumblings come from hundreds of unselfish organized groups like the chapters of the Izaak Walton League.

Right from the beginning of the 70th Congress a canvass disclosed the fact that the work of the Izaak Walton League and other similar organizations had made a pronounced impression upon the members of Congress. It was obvious that conservation legislation as a whole would receive more favorable attention than ever before. The results are very commendable. The Izaak Walton League is justly proud of its part in this worthy program. Briefly summarized the outstanding bills from a national viewpoint are:

The United States has just adopted the most progressive forestry program ever undertaken in America and completes the program of fundamental national forest legislation started a number of years ago. The two bills are:

Woodruff-McNary Forest Purchase Bill: This bill originally planned a ten-year program of forest purchases east of the Plains, and the expenditure of \$40,000,000 during that period. As finally passed the bill provides for a three-year program, and authorizes appropriations of \$8,000,000.

While this is only part of the entire program, it is an encouraging step and replaces the old hit-or-miss method of planning ahead but one year at a time, with far less than an average of \$2,000,000 per year appropriated during the past five years.

The purchases will be made in the Lake States, the Southern States, the Appalachian States and the New England States. The government now owns less than 5,000,000 acres for all pur-

poses east of the Plains. The several states own less than 7,000,000 acres in the same area for forest and park purposes—less than 10,000,000 acres of public lands or one acre for every eight residents.

By adding the projected Shenandoah, Great Smoky and Mammoth National Parks, containing almost a million and a quarter acres, to the public-owned lands and lands to be bought under this bill we will have about 18,500,000 acres, or one acre of public land for every five people in the eastern half of the United States for forest, park, and general recreational use.

McSweeney-McNary Forest Research Bill: This bill as passed correlates and enlarges upon the present forest research activities of the Department of Agriculture, and authorizes a comprehensive forest and wild life research program covering a period of three years. It commits the government to a definite fiscal policy or schedule of expenditures of about \$1,000,000 per

year for these purposes. It provides \$150,000 per year for wild life research as related to forest management.

The consideration given bills to protect game, fur-bearing animals, and wild birds was decidedly favorable. A few of the most important bills are:

King-Colton Bear River Marsh Bill: This bill literally means the salvation of the western ducks. It is one of the western projects given special attention by the Walton League. As passed the bill authorizes an appropriation of \$350,000 for use in reflooding upwards of 100,000 acres of the Bear River Marshes in Utah as a feeding, breeding and resting area for waterfowl and shore birds. Now this area is nothing but a deathtrap which has caused the death of millions of ducks during the past ten years.

Leavitt Elk Lands Bill: Authorizes an appropriation of \$150,000 to match private contributions for the purchase of holdings within the Absaroka and Gallatin National Forests north of Yel-

Game Birds at Home in Helena Dooryards



The State Commission last year closed the season on upland game birds because of the unsatisfactory nesting season. It was imperative that the "seed birds" be preserved. Sportsmen generally expressed universal cooperation and as a result the supply of blue grouse, native pheasants, prairie chickens, as well as Hungarians, Chinese pheasants and sage hens, is now reported plentiful. The picture, taken within the city limits of Helena, demonstrates the manner in which blue grouse have learned to observe protection. This covey spent several days in the front yards of Helena residents, in the shadow of Mount Helena, and on many occasions permitted themselves to be photographed without flushing.

lowstone National Park to supply badly needed food for the elk and other game. This bill, ably handled by Congressman Leavitt, was sponsored originally by the Montana Sportsmen's Association, and the Walton League put its nationwide strength back of the measure.

The Winter Elk Hay Lands Bill (H. R. 478): This measure, authorizing an appropriation of \$275,000 to buy private holdings in Jackson's Hole, met opposition from the Budget Director in its original form. He was willing to approve an appropriation of \$150,000 under the same conditions as imposed by the Leavitt bill above. Friends of the bill tried to have him eliminate the private contribution feature but without success, and the bill will lie over until December 1.

Hope-Curtis Cheyenne Bottoms Bill (H. R. 7361—S. 4153): Authorizing an appropriation of \$350,000 to make a permanent lake of more than 20,000 acres in central Kansas for a water-fowl refuge. This bill was delayed awaiting favorable action from the Budget Director and got caught in the final jam before Congress adjourned. It must lie over until the short session December 1.

Norbeck-Anthony Refuge Bill (S. 1271—H. R. 5467): For the creation of migratory bird refuges to carry out our part of the treaty with Canada. This bill provides for a \$1 license to be paid by those desiring to hunt any migratory birds (except on their own property) the income to be used for the purchase and maintenance of migratory bird refuges and enforcing the migratory treaty act. The bill provides that not less than 60 per cent should at all times be an inviolate refuge, and that not to exceed 40 per cent of every tract purchased could be left open to public hunting. Enemies of the bill made it appear that shooting was planned on a part of every refuge when nothing of the sort was intended.

The fisheries legislation considered this session is of prime importance to the progress of this important phase of our activities. Many bills were introduced; two of them deserve special mention.

White Five-Year Fisheries Program (H. R. 13383): This bill establishes a definite five-year construction and development program of the work of the U. S. Bureau of Fisheries, and will probably mean more to the anglers of the country than any measure promulgated in recent years.

It consolidates into one measure numerous separate bills for the establishment or enlargement of Federal fish cultural and research stations in 33 states. It contemplates the establishment or enlargement of 37 stations, of which 32 are new projects. Most of the stations heretofore developed have been devoted to trout. Seventeen of the new stations are to be devoted to bass, crappie, sunfish, etc.

The research work that will be provided for is vitally essential, and the establishment of these additional stations will make available to the states and to Walton League chapters nearby expert advice that will be much in demand.

This bill, covering expenditures of

almost \$2,000,000 during the five years, was introduced late in the session but passed the House very quickly. It passed the Senate late in May and was placed before the president for his signature.

Jones-Johnson Irrigation Ditch and Screening Studies (S. 3437—H. R. 11796): This bill passed and has been signed by the President; authorizes the expenditure of \$25,000 by the Bureau of Fisheries for making studies and further development of workable screening devices already in use as well as such others as may be necessary to save the millions of game and food fish destroyed annually by irrigation ditches.

The Barbless Hook

HERE'S one for Montana anglers to think about: Whether a size limit for fish should be fixed by law or whether anglers should be permitted to take fish regardless of size, is still a disputed question, according to a bulletin of the American Game Protective Association. Most states fix certain size limits, basing the regulation on the ground that no fish should be taken until large enough to spawn, but others have recently removed the restriction because of the claim that most small fish are killed by handling.

The use of barbless hooks is to be encouraged when it is the practice or requirement to return small fish to the water. No matter how careful the angler is in removing the fish, if any of the small scales are removed and this injury allows bacteria to reach the flesh underneath, fungus sets in and the trout eventually are killed.

Anglers should use every possible precaution to prevent the scales being knocked off when the fish of small size are being removed from the hook. It will be found that if the hands are moistened with water there will be less chance of injuring the fish, even of the bass family, during the process of taking them from the hook.

The desire to conserve fish by liberating the small ones without injury has been the greatest factor in the matter of popularizing the barbless hooks. When they are used it is not necessary to handle the fish, but if they are given a bit of slack line they will unhook themselves without being handled. The barbless hooks have gained great favor with many anglers and their use on streams where there is an abundance of small fish is a great conservation measure that all anglers should encourage.

Vanishing Fur Bearers

For the past two seasons of trapping the fur catch in this country has declined at an alarming rate, says the Biological Survey of the United States Department of Agriculture. The 1925-26 catch was 20 per cent less than in the previous year and in the 1926-27 season the decline was even greater.

"If trappers continue to disregard the fur laws," says Paul G. Redington, chief

of the Survey, "and to trap out of season, more and more species will be reduced below the point where it is profitable to take them. If states do not take the steps needed for protection of their stocks of fur animals, the revenue from this source is sure to diminish and, of far greater import, many of the former suitable haunts of these valuable and interesting animals will know them no more. The main requisite is a recognition of the fact that trapping should be allowed only during the period of prime fur and should not include the breeding season."

Age of Geese

How old is Ann if Ann be a goose? We have often read that wild geese live to be centenarians. Invariably the thought always goes through our minds as to how this statement could be proved.

Now comes Henry Stark of Michigan, who says that in a few years more he will have the proof that will convince any one, even though the skeptic hails from the "show me" State of Missouri.

In 1855 an uncle of Henry Stark's captured two Canada geese in a net spread along the beach of the Chickanooga Islands in Chesapeake Bay. Since that time this pair of geese have been paddling around farms owned by members of the Stark family.

A few years ago the uncle died at the ripe age of eighty-one, but the two Canada geese are still thriving and alert and seemingly in the prime of their youth. No one knows how old these geese were when captured, but Mr. Stark says he has the evidence that they are sixty-seven now and he hopes they will prove the statement that wild geese live to be a hundred.

Northern Fur Company

Buyers of

RAW FURS

Missoula, Montana.

oooooooo

Specimens of the different species of bear suitable for rugs, lion and other predatory animals of the state, can be bought from us at all times. Taxidermist and Furrer in connection with the business.

Doings of the Commission



J. L. Kelly

WHEN Montana's Fish and Game Commission went into annual session at Helena May 4, Thomas N. Marlowe of Missoula was again given merited recognition when he was re-elected chairman by unanimous vote. Mr. Marlowe attended his first meeting of the Commission January 5, 1920, and has served continuously. He was first elected chairman April 20, 1921, and for seven years has ably filled the position. At the annual meeting of 1928 Joseph L. Kelly of Anaconda was reappointed by Governor J. E. Erickson and began serving his twelfth year. Mr. Kelly was first appointed to the Commission by Governor S. V. Stewart December 29, 1917, and served two years as chairman. He is the oldest member from the standpoint of service. Other members attending were E. A. Wilson of Livingston, G. T. Boyd of Great Falls, W. K. Moore of Billings, State Game Warden Robert H. Hill, and the two field assistants in charge of hatcheries, Dr. I. H. Treece and John M. Schofield.

Action was taken looking toward establishing a game sanctuary for ducks and prairie chickens near Twin Bridges.

Dr. Treece was instructed to investigate the feasibility of co-operating with the Deer Lodge Anglers' Club in constructing rearing ponds in Three Mile Creek.

President Cecil V. Wilson of the Lewis and Clark County Rod and Gun Club presented a petition asking that Trout Creek be opened to its source and that Landers Fork to its source and all its tributaries be opened. The request was approved. Dr. Treece was instructed to investigate rearing pond sites in Lewis and Clark county.

The resolution passed by the Montana Stockgrowers' Association at the Havre meeting regarding the Sun River elk herd was ordered investigated, taken up with the Forestry Department at Missoula and brought up for consideration at the next meeting.

The opening of the season on landlocked salmon in the Browning territory was ordered investigated by Mr. Schofield.

In order that a spawn-taking station be developed for rainbow trout eggs at Lake Francis, near Valier, the Commission ordered the irrigation ditch closed

from the lake to Conklin Gates until further orders.

Suggestions of Mr. Schofield that certain tributaries of Sweet Grass Creek in Sweet Grass county be closed and the creek left open were adopted pending further information.

A hearing was ordered in Flathead county on application to close the season in specified areas on pinnated grouse and elk.

Another hearing was ordered on application of Broadwater county sportsmen asking an open season on Chinese pheasants, the closing of fishing in all county streams between September 15 and November 15 and the opening of the Missouri River at all seasons to ice fishing.

On petition of the Stillwater Club, Horseman or No-Catch-Em Lake was opened to fishing during the regular season but Bad Canyon Creek will remain closed.

Because of having no legal right, under the statutes, to recognize such a claim, the bill for \$250 from T. F. Murphy of Fort Shaw for alleged damage to flax by antelope was denied.

Permission was granted the United States Bureau of Entomology to kill a limited number of migratory birds in connection with investigation of the problem of destruction of lodgepole and yellow pine.

Chairman Marlowe was instructed to take up the problem of the merganser duck with the Federal Biological Survey with the desire of co-operating with the department.

Alvin Seale of the Steinhart aquarium of San Francisco was given permission to place a display of Montana grayling and trout in California.

The Commission accepted the offer of

Matt Ryckman, superintendent of Oregon hatcheries, to exchange 500,000 Chinook salmon eggs for 1,000,000 grayling eggs.

Chairman Marlowe was instructed to confer with leaders of the Western Montana Fair Association regarding building an aquarium and fish and game exhibit hall in time for the Missoula fair September 19-21.

St. Joe Creek, tributary to St. Regis Creek in Mineral county, was opened to fishing during the regular season.

The petition of the Butte Anglers' Club asking permission to use salmon spawn for bait in the Big Hole River was denied and the request of the club to close the north and west ends of Delmo Lake was approved.

Permission was granted sportsmen of Ronan and Polson to seine sunfish and catfish from Nine Pipe Reservoir to plant in other waters. Bass have been secured in these seining operations and it has been decided to stock the Clearwater Lakes with bass instead of trout.

The claim of B. F. Freeland of Galatin Gateway for \$630 damages alleged to have been done by elk was denied, because the Commission has no legal authority to recognize such claims.

The Commission endorsed the building of the road turning off the main highway at Dixon going past the National Bison Range and the Nine Pipe Bird Sanctuary.

Arrangements were completed to put out an additional supply of salt for the elk in the Thompson Falls area.

A supply of eyed eggs of native trout was ordered sent to the upper Swan Ranger District for planting in waters in the Mission Mountains.

After extended discussion the Commission agreed to co-operate with heads of the University of Montana in maintaining the biological station on Flathead Lake for the study of fish and game problems. Expenditure for this work is not to exceed \$4,000.

Complaint was made by the Lewistown Rod and Gun Club regarding the predatory animal contest and tactics used by some contestants with the request that it be dropped.

Chairman Marlowe read correspondence from the U. S. Bureau of Fisheries outlining a plan for the expenditure of \$35,000 authorized by Congress for the Federal Fish Hatchery at Meadow Creek.

Because of the backward season delaying thawing of ice in Georgetown Lake, on recommendation of Dr. Treece the Commission ordered the lake closed to fishing until June 15, 1928, in order that spawn-taking activities may proceed unhampered.

Meeting of March 27

All members of the Commission attended the session at Helena March 27.

REQUIEM

Only a man in the forest green
Only a match that was dropped, unseen;
Only some duff, some leaves and wood—
Now desolation where forest stood.

No more grass, nor flowers, nor trees,
Nor singing birds, nor humming bees,
Nor cotton-tail, nor timid deer,
Nor gobble strutting without fear,
Nor cooling dove, nor hooting owl,
Nor winging southward waterfowl,
Nor chattering squirrel, nor smiling coon,
Nor dewey morn, nor shady noon,
Nor cooling dell, nor mossy log,
Nor rippling rill, nor flow'ring bog.
Gone, all gone, to come no more
With pleasures and with plenteous store.—

Only a man in the forest green,
Only a match that was dropped, unseen,
Only some duff, some leaves and wood—
Now desolation where forest stood.

W. J. Winnett of Winnett, veteran Indian scout and hunter, explained a plan for the establishing of beaver farms, the trapping and transporting of live beaver and a patented trap.

Game Warden Hill reported on progress at the Miles City pond culture station and the necessity for rip-rapping, which was approved.

The Commission expressed its willingness to co-operate with the Beaverhead Anglers' Club in the construction of rearing ponds when easements on land are secured.

Chancellor Melvin A. Brannon of the University of Montana explained in detail the plan to operate the biological station on Flathead Lake.

The report of Sanitary Engineer H. B. Foote on investigation of the sugar beet pulp situation while at the Denver convention of the American Water Works Association was received, and Mr. Foote given a vote of thanks. The question of stream pollution at Whitefish and Great Falls was directed taken up with the Great Northern Railway.

Application for the construction of a fish ladder in Kootenai Falls in the Kootenai River was ordered investigated at a hearing to be held at Eureka.

Game Warden Hill made an interesting report regarding the creation of a bird sanctuary near Lake Bowdoin in Phillips county, following a hearing at Malta with leaders of the Milk River Valley Gun Club.

O'Dell Creek in Madison county was

ordered closed to fishing from its mouth to the main highway between Ennis and Jeffers from October 1 to December 1.

The Commission authorized the establishing of a monthly magazine to be known as "Montana Wild Life" and engaged Floyd L. Smith as editor. It was ordered that the defraying of the expense of publishing and distributing The Big Horn magazine be discontinued.

Ammunition for the use of deputies in the destruction of predatory birds and animals was ordered purchased. The predatory animal contest was ordered continued under rules and regulations as before.

The matter of planting Loch Leven trout in the Big Hole River was referred to Dr. Treece for investigation.

William Ray Kohls of Virginia City was appointed special deputy game warden in Madison county. He is an ex-service man.

The Commission went on record as placing the merganser duck on the predatory list in Montana and Warden Hill was instructed to communicate with the Federal Department of Fisheries.

HONESTY PLUS

"What is the defendant's reputation for veracity?" asked the judge.

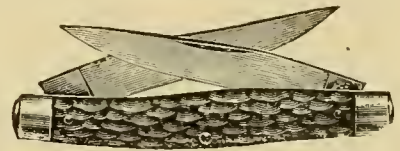
"Excellent, your honor," said the witness. "I've known him to admit that he had been fishing all day and hadn't got a single bite."

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